

LISTING OF THE CLAIMS

Claim 1 (Previously Presented) A data transmission/reception apparatus for performing a data transfer by a pipeline technique between a predetermined number of processing sections, each processing section being capable of performing a data process and the predetermined number of processing sections being two or more, said apparatus comprising:

a predetermined number of intermediary sections for interconnecting a first data processing section and a second data processing section and allowing data processed by the first data processing section to be transmitted to the second data processing section, the first data processing section and second data processing section being adjoining data processing sections, and said predetermined number of intermediary sections being smaller by one than the predetermined number of processing sections,

wherein the first data processing section includes a transmission section for providing connection to said predetermined number of intermediary sections to transmit the data to the second data processing section; and the second data processing section includes a reception section for providing a connection to said predetermined number of intermediary sections to receive the data transmitted from the first data processing section, and each predetermined number of processing sections being either an active processing section or a passive processing section, and

wherein said predetermined number of intermediary sections generate a data queue for retaining data to be transferred when said predetermined number of intermediary sections detect that both the first data processing section and the second data processing section are the active processing sections, and said predetermined number of intermediary sections do not generate the data queue when said predetermined number of intermediary sections detect that either the first data processing section or the second data processing section is the passive processing section.

Claims 2-4 (Canceled)

Claim 5 (Previously Presented) The data transmission/reception apparatus according to

claim 1, wherein the transmission section in the first data processing section executes a transmission request in a common mode irrespective of whether the second data processing section is the active processing section or the passive processing section; and the reception section included in the second data processing section executes a reception request in a common mode irrespective of whether the first data processing section is the active processing section or the passive processing section.

Claim 6 (Previously Presented) The data transmission/reception apparatus according to claim 1, wherein said predetermined number of intermediary sections is equal to or greater than two, and said predetermined number of intermediary sections performs an identical function.

Claims 7-12 (Canceled)

Claim 13 (Previously Presented) A data transmission/reception apparatus for performing a data transfer by a pipeline technique between a predetermined number of processing means each processing means being capable of performing a data process and the predetermined number of processing means being two or more, said apparatus comprising:

a predetermined number of intermediary means for interconnecting a first data processing means and a second data processing means and allowing data processed by the first data processing means to be transmitted to the second data processing means, the first data processing means and second data processing means being adjoining data processing means, and said predetermined number of intermediary means being smaller by one than the predetermined number of processing means,

wherein the first data processing means includes a transmission means for providing connection to said predetermined number of intermediary means to transmit the data to the second data processing means; and the second data processing means includes a reception means for providing a connection to said predetermined number of intermediary means to receive the data transmitted from the first data processing means, and each predetermined number of processing means being either an active processing means or a passive processing means, and

wherein said predetermined number of intermediary means generates a data queue for retaining data to be transferred when said predetermined number of intermediary means detect that both the first data processing means and the second data processing means are the active processing means, and said predetermined number of intermediary means does not generate the data queue when said predetermined number of intermediary means detect that either the first data processing means or the second data processing means is the passive processing means.